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Original Article

Public prophylaxis: Pandemic influenza, pharmaceutical prevention and participatory governance

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Abstract In this article, I explore recent discussions among American public health professionals over how to protect the health of the nation in a state of emergency. My focus is specifically on questions of preventative strategy and population management, examining intensive debates around the prioritization of protective vaccine for pandemic influenza. Drawing on ethnographic research, I show how the mode of circulation, distribution and allocation of pandemic vaccine was gradually refashioned in the United States over the past 2 years. When government officials launched public engagement meetings reformulating in ethical terms the crucial question of how to dispense a scarce pharmaceutical resource in a public health emergency, a distinctive set of priorities emerged. My aim, in this article, is to examine this ethical refashioning and to interrogate the curious logics of public-ness that are increasingly embedded in a growing number of approaches of public health professionals. How are populations gathered into the fold of pharmaceutical prevention today?
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Introduction

In this article, I examine a recent reconfiguration in the mode of circulation, distribution and allocation of protective vaccine for pandemic influenza in the United States. Drawing on 18 months of ethnographic fieldwork conducted among American biomedical scientists and public health professionals, I focus on a series of public engagement meetings launched by government officials in order to determine vaccination priorities. At the heart of these meetings, organized over the past few years in a number of locations in the United States, was the question of how to dispense a scarce pharmaceutical resource in a public health emergency. When government officials reformulated the fraught question in ethical terms, a new vaccination scheme emerged. At the core of this new scheme, validated and authorized by a distinctive form of participatory governance, was not the protection of vulnerable

populations at risk for serious complications but the preservation of 'essential services'. The focus was, as it were, on 'public safety' and the 'functioning of society' during a public health emergency.

As I show in this article, the new vaccination scheme with its peculiar normative orientation was predominantly concerned with the optimal circulation of people, goods and things in an anticipated state of rupture caused by the sudden spread of an infectious disease. But it is not only and primarily the peculiar normative orientation that matters here, of equal interest is the crucial fact that the scheme emerged out of a series of public engagement meetings launched by government officials in response to intensive debates over the legitimacy and accountability of public health policy more generally. Given this historical context, my focus, in this article, is on the animation and mobilization of publics for the validation and authorization of a distinctive strategy of pharmaceutical prevention. In pursuing this perspective, my aim is to bring into better relief the relationship between ethical reasoning and participatory governance and to interrogate the curious logics of public-ness that are increasingly embedded in a growing number of approaches of public health professionals.

In the first part of this article, I provide a detailed documentation of the vaccination priorities as they gradually changed in the United States over the past few years. I then situate my anthropological investigation of the vaccination priorities in recent scholarly debates concerning the ascendancy of ethical reasoning and participatory governance in advanced liberal societies. Rather than to call for more and better public participation in public health policy-making, I suggest that it is imperative to analyze how participation actually happens in particular places at particular times and to carefully attend to the unexpected effects of the performance of such participation. The question that I want to pose in this article is the following: What kind of public, what kind of ethics and what kind of emergency have come to matter in the public engagement meetings on pandemic influenza? A tentative answer to this question will allow me to examine how these forms are mutually implicated in a contemporary regime of pharmaceutical prevention.

Changing Priorities

In early 2005 two prominent advisory bodies to the US federal government, the Advisory Committee on Immunization Practices (ACIP) and the National Vaccine Advisory Committee (NVAC), formed a joint working group to assist the US Department of Health and Human Services (HHS) in its effort to develop a prioritization scheme for the allocation of influenza vaccine in the event of a pandemic. The joint working group mobilized technical experts, consulted with representatives from a number of government agencies and non-governmental organizations, and confirmed that it was the primary goal of the pharmaceutical intervention to reduce morbidity and mortality as much as possible. The recommendations suggested by the working group were adopted by both advisory committees unanimously on 19 July 2005, and were subsequently included in the HHS Pandemic Influenza Plan, an exhaustive planning document of the US government officially released in early November of 2005.[1]

1 The plan is available online at: http://www.hhs.gov/pandemicflu/plan.

Pandemics of influenza are currently thought to occur in irregular intervals and appear to be caused by the sustained human-to-human transmission of a new subtype of the influenza virus. The industrial mass-production of a safe and effective vaccine for such a new agent takes considerable time; public health professionals estimate that the earliest batches become available some 12 to 16 weeks after the successful isolation and identification of the emerging pathogen. As demand for a protective vaccine is likely to exceed supply especially in the event of a severe pandemic, public health authorities are rightly expected to allocate the scarce pharmaceutical resource as effectively and as fairly as possible. Charged by the US government to prepare for the next pandemic, public health officials anticipated the future need to prioritize pandemic vaccine and tasked the ACIP (and the NVAC) to address the projected state of exception in advance and determine a provisional plan. Faced with a tailor-made problem formulated in predominantly technical terms, the ACIP mobilized its expertise, consulted with stakeholders and approached the hypothetical question by developing a provisional scheme in a relatively short amount of time.[2]

The priority groups in the highest tier of the ACIP vaccination plan reflected for the most part the high-risk groups already recommended by the advisory committee for vaccination during regular seasonal influenza. According to this scheme, persons with high-risk conditions, household contacts of children younger than 6 months, household contacts of severely immuno-compromised persons, pregnant women and health-care workers should be immunized first in the case of a global outbreak of pandemic influenza. These people, public health experts reasoned, are either themselves most at risk of death and disease, or are in close contact with such persons and should thus be treated first. In addition, and in contrast to the recommendations for vaccination during regular seasonal influenza, key government decision makers as well as vaccine and antiviral manufacturers were included in the highest tier.

In late February of 2007, I traveled to Atlanta to participate at an ACIP meeting as part of my ethnographic fieldwork that I conducted over a period of 18 months among biomedical scientists and public health professionals in the United States. After passing a tight security screening at the entrance of the disease control centers, I arrived just in time for the presentation of a new prioritization scheme. This new scheme, as I gradually realized, clearly made a stronger appeal to the US government than the ACIP recommendations already included and published in the HHS Pandemic Influenza Plan. At the core of the new scheme, as Dr Ben Schwartz of the National Vaccine Program Office (NVPO) explained, was not the protection of vulnerable populations at risk for serious complications but rather the preservation of 'essential services'. The focus was, as it were, on the 'functioning of society' during a public health emergency. Although the ACIP recommendations attended to the needs of young children, pregnant women, immuno-compromised persons and other high-risk groups, Dr Schwartz argued that it was necessary to bring these valid concerns with

2 The ACIP is a prominent advisory body of the US government consisting of 15 experts in the fields of epidemiology, immunology and pediatrics, individually selected by the US Secretary of Health and Human Services. ACIP members regularly convene on the commanding campus of the Centers for Disease Control and Prevention in Atlanta for a few days of deliberation and decision-making. During the early years of the HIV/AIDS epidemic, meetings of the advisory committee regularly turned into a public site of intensive biopolitical contestation (see Etheridge, 1992; Epstein, 1996).

vulnerable populations into balance with the crucial requirements of 'homeland security' and 'critical infrastructure protection'.

The new vaccination plan with its distinct normative orientation toward 'critical infrastructure protection' was primarily concerned with the optimal circulation of people, goods and things in a state of rupture – a concern, as French philosopher and historian Michel Foucault reminds us, that lies at the heart of the apparatus of security (Foucault, 2006; see as well Caduff, 2008). Among ACIP members, a skeptical view, to say the least, prevailed. 'This is the second time', as Dr Ban Mishu Allos crisply remarked in the aftermath of Dr Schwartz's presentation, that the federal government 'is taking away a vaccine recommendation from the ACIP'.[3] Although Dr Allos' comment made no immediate impact, it revealed that the air-conditioned room at the disease control centers was filled to the brim with power and politics. At a following meeting in October 2007, Dr Schwartz presented the most recent draft of the new federal guidance for the allocation of pandemic vaccine, again largely focused on mitigating potential economic disruptions rather than preventing negative health effects. On this occasion, however, no public comments were made by ACIP members in response to the provocative presentation presumably because of time constraints. Apparently the predominant view within the ACIP was 'to let things go', as one of my informants reported during a coffee break.

Public health and national security

The sudden realization that an innocent-sounding public health matter actually carries a substantial political charge may come as no surprise. In recent years, a number of scholars have mapped the politics of public health extensively, especially, but not exclusively, in the context of the ongoing HIV/AIDS pandemic. In addition, a growing body of scholarly work has begun to explore the global production, circulation and consumption of pharmaceuticals (van der Geest and Reynolds Whyte, 1991; van der Geest *et al*, 1996; Biehl, 2004; Lakoff, 2005, 2007b; Petryna *et al*, 2006; Hayden, 2007a; Petryna, 2009). Drawing on participant observation, interviews with key actors and complementary documentary research, my article extends this line of inquiry and brings into relief a biomedical intervention aimed at ensuring access of specific populations to specific medications in an anticipated state of exception. Distinctive for my case is that it considers an example of the control of access to drugs not in the South but in the North, and that the regulatory intervention was provoked not in the context of an acute pharmaceutical crisis (Biehl, 2004) but under the sign of a looming public health threat. The prospect of a future moment of rupture sufficed to prompt an immediate biopolitical intervention in the present.

The new guidance with its distinctive orientation toward the seamless circulation of people, goods and things was officially released in July 2008. As Dr Jeffrey Runge, Assistant for Health Affairs and Chief Medical Officer at the US Department of Homeland Security remarked, the new guidance was developed 'to ensure that our nation's critical infrastructure remains up and running' (Roos and Schnirring, 2008). In a news release, HHS Secretary Michael O. Leavitt underscored that the vaccination plan represented 'the result of a deliberative democratic process' in which, he claimed, all interested parties extensively

3 Dr Allos' reference was to the so-called smallpox vaccination program launched by the George W. Bush administration in 2002 just months before the US Army invaded Iraq. On this program, its role in the 'war on terror' and its ultimate failure, see Rose (2008).

participated. According to Leavitt, the document directly reflected 'the values of our society and the ethical issues involved', representing 'the best of shared responsibility and decision-making' (HHS, 2008).

As historian of medicine Nicholas King and other scholars have pointed out, public health, national security and international commerce have always been in a close relationship, especially in the United States (King, 2001, 2002). In the notorious form of quarantine, systematic efforts to isolate potential carriers of infectious germs so as to prevent pandemics and protect populations have been at the heart of security measures mobilized by the state as a drastic means to maintain its sovereignty and control its borders (Baldwin, 1999). In the aftermath of the terrorist attacks and the anthrax scare of 2001, militarized logics for dealing with infectious disease have indubitably become more influential than ever before in the United States (Cooper, 2006; Lentzos, 2006; Dillon and Lobo-Guerrero, 2008; Lakoff and Collier, 2008; Lentzos and Rose, 2009). In this article, my concern, however, is not primarily with the formation of an ever-tighter alliance between public health, national security and international commerce in the United States but rather with the peculiar way in which the new set of priorities were articulated and authorized. Significantly, the new set of priorities took shape in the context of intensive political debates over the legitimacy and accountability of public health policy. In late August of 2005, a series of experimental public engagement meetings were launched in order to determine 'the values of our society', as Leavitt put it. By rendering the normative dimension of public health policy explicit and by actively involving the public in the decision, an 'ethical prophylaxis', to use Sarah Franklin's felicitous phrase, was built into the new vaccination plan (Franklin, 2003). But before I explore in more detail the participation of the public in a state of security, I want to say a bit more about public engagement itself as a participatory form of governance.

Participatory forms of governance

As scholars have pointed out, participative forms of governance such as public engagement have emerged in recent years in response to both structural shifts in knowledge production and critical events in risk management (Nowotny *et al*, 2001; Jasanoff, 2003, 2005; Reardon, 2004, 2007; Stilgoe *et al*, 2005; Winickoff *et al*, 2005; Rabinow and Bennett, 2007; Lengwiler, 2008). A chain of 'dislocatory events' (Gottweis, 2008) from Bhopal to Chernobyl to the uncontrolled spread of HIV/AIDS and BSE revealed the substantial limits of an ostensibly objective and purely technical form of scientific expertise (Beck, 1992; Jasanoff, 1994a; Epstein, 1996; Fortun, 2001; Petryna, 2002). Controversial public debates about genetics, biomedicine and biotechnology (and their increasing commodification) made it clear that scientists and technocrats were either unwilling or unable to deal with existing social concerns. Vividly engaged in relentlessly revealing, analyzing and documenting the politics of modern scientific expertise and technological governance, activists and academics alike began to request greater accountability in techno-scientific policy-making. Idioms of participation appealed to the democratic passions of these actors and seemed to promise government agencies effective means to generate trust and credibility and increase public support for policy outcomes (Gibbons, 1999; Reardon, 2004, 2007; Lofstedt, 2005; Hayden, 2007b; Schoch-Spana *et al*, 2007).

Scholars in the field of science and technology studies have by and large oscillated between actively promoting notions of participation and critically evaluating concrete examples of

public involvement in the governance of science and technology. Extending her earlier work on scientific expertise in the United States (Jasanoff, 1994b), Sheila Jasanoff recently affirmed that 'technical policy-making needs to get more political' (Jasanoff, 2003). The issue, Jasanoff suggested, 'is no longer *whether* the public should have a say in technical decisions, but *how* to promote more meaningful interaction' between policy-makers, experts and the public at large. In her article, Jasanoff identified emerging forms of public participation as 'technologies of humility' and suggested that these technologies may render policy-making more accountable to society, but she also cautioned that participatory mechanisms cannot by themselves ensure the democratic governance of science (Jasanoff, 2005; Winickoff *et al*, 2005).

A second strand of science and technology studies scholarship has focused on the multiple ways in which publics gather around 'matters of concern' (Stengers, 1997; Callon *et al*, 2001; Callon, 2004; Latour, 2004a, 2004b; Marres, 2007). The work of Bruno Latour, Michel Callon and other researchers has drawn attention to the public venues in which citizens are encouraged to assemble, express their opinions, articulate their interests and resolve complex techno-scientific issues in the medium of deliberation. Matters of concern, these scholars argue, can be solved by bringing together all pertinent groups 'in order to achieve an acceptable *modus vivendi* among them' (Callon, 2004; for a critical account see Stengers, 2004). Among the crucial aims of the scholarly effort to articulate a democratic politics of science is the attempt to 'make explicit the normative that lurks within the technical', as Jasanoff phrased it (Jasanoff, 2003).[4]

This generative line of inquiry pursued in recent scholarship has vividly shown how the authorization of scientific knowledge necessarily depends on the construction of particular kinds of publics. As historians of science Steven Shapin and Simon Schaffer argued in their seminal study of Boyle's air-pump, the capacity of experimental knowledge production to generate reliable matters of fact depended 'not only upon their actual performance but essentially upon the assurance of the relevant community that they had been so performed' (Shapin and Schaffer, 1985). Experimental procedures had to be conducted in public under the eyes of reliable witnesses to produce credible facts. Today, participative forms of governance such as public engagement increasingly provide a powerful institutional framework for the public validation and authorization not of scientific experiments but of government policy more specifically (Gottweis, 2008).

However, as scholars have increasingly begun to point out in recent years, participative forms of governance have significant limitations. According to Jenny Reardon, in the context of intensive biopolitical action 'energies are best spent not on energetic calls for democratization, but on the more subdued task of analyzing how democratization happens – what logics underlie it, what practices make it up' (Reardon, 2007). Close analytic attention must be paid especially to the ways in which 'publics' are constituted by certain forms of reasoning. As Paul Rabinow and Nikolas Rose have shown, it is especially ethical reasoning which has become a central mode of public conversation about emergent orders of health and disease (Rabinow, 1999; Rose, 2007). Extending Michael Warner's theorization of

4 There is, of course, a large and diverse literature on practices of democratic governance and 'participation' in anthropology and the social sciences more generally. For a recent example of a critical ethnography of democracy, see Paley (2001).

publics and counterpublics (Warner, 2005), Lawrence Cohen has suggested that ethical conversation is not just 'located *in* the public sphere but more fundamentally […] constitutive *of* it' (Cohen, 2003). Ethical reasoning, in other words, is actively involved in the animation and mobilization of publics. In the next section, I want to take a close look at the public engagement meetings on pandemic influenza and explore how ethical reasoning is engaged in the constitution of those 'publics' which are increasingly required as correlative objects of participative governance. Exploring this question in detail my aim is to illuminate a contemporary regime of pharmaceutical prevention, in which the animation and mobilization of the *public* by ethical reasoning has become a means of identifying and circumscribing the *population* as a target of regulation. How, then, is the juridical notion of the public conceived of as a collection of legal subjects endowed with reason and the capacity to articulate personal preferences reactivated and redeployed in a biopolitical regime of pharmaceutical prevention?

Facts and Values

On 19 June 2002, Dr Roger Bernier testified before the US House Committee on Government Reform in his role as Associate Director of Science at the US Centers for Disease Control and Prevention (CDC). Bernier is a mild-mannered, soft-spoken man in his mid-60s whose career at CDC began with early field assignments to the Venereal Disease Program in New York City and the Smallpox Eradication and Measles Control Program in Niger, West Africa. Following graduate school, Bernier joined, as so many of his colleagues did, CDC's famed Epidemic Intelligence Service. Assigned to the National Immunization Program as a staff epidemiologist, he was named Chief of the Epidemiologic Research Section later on and became, more recently, Associate Director of Science. Bernier's professional work at the disease control centers has focused primarily on epidemiological studies of the safety and efficacy of vaccines.

In 2002, as Bernier vividly told me, he testified at a congressional hearing in response to growing public concerns that thimerosal, a mercury-containing preservative in vaccines, may be responsible for autism, a condition characterized by impaired social interaction, communication difficulties and repetitive behaviors. In his carefully worded presentation on Capitol Hill, Bernier meticulously described CDC's ongoing vaccine safety research activities. Thimerosal is a hotly contested, politically charged chemical compound and Bernier's detailed explanation of ongoing research was supposed to demonstrate that federal agencies were taking seriously deeply rooted concerns regarding the safety of vaccines. In order to determine the potential role of thimerosal in causing autism and other neurodevelopmental disorders, the centers for disease control initiated a case-control thimerosal/autism study and an extensive thimerosal follow-up study. Further research and more reliable scientific evidence, Bernier confidently emphasized, were in the offing. At the end of the congressional hearing, an autism activist approached Bernier and told him that CDC's studies were 'dead on arrival'.

This story was related to me by Bernier in late fall of 2007 when we met in CDC's newly designed library in the aftermath of an ACIP meeting. No scientific evidence, however clear, however hard, however tried and tested, would be able to resolve the fundamental

disagreement, or so it seemed. What was necessary, Bernier realized, was not a new case-control study published in a prestigious journal shelved in CDC's modern and spacious library, but a different approach altogether. 'My conclusion was', Bernier reasoned, 'that this was a trust problem. More research was not going to solve this problem. There was a relationship problem'. Shortly after his revealing encounter with the autism activist on Capitol Hill, Bernier asked to go on a special assignment in order to explore more systematically the germ of an idea that had caught his interest: public engagement. The call to enhance 'public engagement' or to foster 'public deliberation' or to conduct 'public consultation' in policy matters is not a new phenomenon (Lofstedt, 2005; Gottweis, 2008). In fact, the disease control centers organized a series of public engagement and stakeholder meetings in the past decade in relation to a variety of public health issues. Bernier, at any rate, rapidly ascended to an enthusiastic promoter of the promising idea at the federal agency.

As Bernier explained to me that late afternoon, he considered the contentious debate around thimerosal a hopeless issue. There was nothing one could do to resolve the fundamental disagreement. For a public engagement project to be successful it had to be launched at the outset of an emerging debate before the critical dialogue was about to turn into a polemic of accusations and become an irresolvable dispute. Furthermore, as Bernier reasoned, 'when there is an open conflict, you really don't want to bring in the man on the street who is not involved in the conflict'. Although the idea of public engagement was developed in response to controversial public matters, it was, in fact, essential for its eventual success to address *non-controversial* or *not-yet-controversial* public matters, as we might phrase it. But what exactly counts as a not-yet-controversial public matter in an increasingly privatized world of health-care provisioning?

In early 2005, Bernier found himself mining for a not-yet-controversial matter to test his newly developed model of engaging the public on a vaccine-related policy decision. The ACIP deliberations, in which he was involved as an expert, immediately piqued his interest and in July of 2005 Bernier and Dr Edgar Marcuse, a Professor at the University of Washington and Associate Medical Director at Children's Hospital in Seattle, launched what they called the *Public Engagement Pilot Project on Pandemic Influenza* (CDC, 2005). This experimental project was funded and supported by a number of organizations, among them CDC and the Institute of Medicine of the National Academies of Science. The question of how to prioritize pandemic vaccine was selected for public engagement primarily because it offered an apposite opportunity to test the new model in real-time. It was an intriguing public health policy question vividly discussed among experts and it had not yet become a contentious public issue. In fact, it had sparked almost no interest at all beyond the inner circles of the public health community. The prioritization of pandemic vaccine also seemed a suitable test case because it involved 'a consideration of both values as well as science', Bernier told me. As we shall see in the next section in more detail, the symbolic distinction between facts and values plays a crucial role indeed in the constitution of the public which is consulted by these public health specialists.

Of inclusion and exclusion

Given the growing importance of audit practices in advanced liberal societies (Strathern, 2000; Power, 2004), it is not surprising to find the Public Engagement Pilot Project on

Pandemic Influenza launched by Dr Bernier and Dr Marcuse extensively documented and meticulously evaluated. An outside group of academic researchers was charged to carefully review the Pilot Project so as to render the success of the experimental endeavor visible in the institutionally recognized form of an independent evaluation. A final document entitled Citizen Voices on Pandemic Flu Choices was published in December of 2005 (CDC, 2005). According to this report, the project was based on the following three premises:

1. 'that the formulation of vaccine policies […] requires policy-makers to understand the range of society's values on the issues'.
2. 'that the process which will best reflect society's values is a public engagement process […]'.
3. 'that an inclusive public process […] will produce sounder, more supportable decisions […]' (CDC, 2005).

The Pilot Project involved both stakeholder and public engagement meetings. Approximately 50 stakeholders (representatives from various government agencies, non-governmental organizations and private companies) met twice in order to frame the issues submitted to one-day public engagement meetings convened in Atlanta, Boston, Omaha and Portland, respectively. A total of 250 US citizens participated in these four meetings held in urban centers representing the southern, eastern, northern and western parts of the country.

The recruitment of participants for such consultations, as a local organizer of one of the public engagement meetings told me, is indeed central, for it is, as this organizer suggested, not simply the 'public' that must be enrolled by public health specialists, but the *right* public that must be gathered into the fold of public health. The 'public' that these experts wished to engage was not just a random pool of individuals but a selected group of persons, representing society at large. This selected group of persons was supposed to form a collective body that includes, involves and transcends them. For what is at stake in public engagement are not just individual preferences, as public health officials maintained, but 'society's values'. To establish this collective body articulating society's values it was necessary to carefully select its members, and this process of selection entailed both an act of *inclusion* and *exclusion*. As the local organizer explained to me: 'We were very selective of who we took. We wouldn't take anybody with emergency management background. We wouldn't take anybody with a big knowledge on health care. I didn't want anybody that came in a little bit tainted, that knew already a lot about pandemic flu. So we were pretty good at screening. And then originally we got a lot of people in that we thought were too qualified. We called them up and asked them not to participate. Everybody was very gracious and agreed. We said, you know, what we really want is a true picture of people who don't really have a lot of knowledge about pandemic flu'. Alongside the necessity to include people in the performance of participation thus lies the equally necessary effort of deliberately excluding people from it. Guiding the recruitment and selection of participants was a particular set of norms, which reflected the kind of 'public' that the organizers wished to engage in the first place. The 'public', it seems, is only able to validate and authorize a public health policy of pharmaceutical prevention if it manifests itself in the appropriate form. Here, I am borrowing an argument about 'efficacy' proposed by social anthropologist Marilyn Strathern in her ethnographic investigation of Melanesian sociality. In this work, Strathern suggests that persons, things and actions must assume a recognizable form to elicit a

particular effect (Strathern, 1988). Strathern shows in great detail how the Hageners of the Papua New Guinean Highlands are engaged in a variety of processes aimed at making the appropriate form appear at particular moments of social life. The 'public', we might say with Strathern's argument in mind, must take the right shape to validate and authorize public health policy. It is only able to perform participation and produce a persuasive resolution if it assumes the appropriate form.

At the heart of the construction of the right public was the crucial distinction between facts and values. As Bernier suggested, there are empirical facts just as there are ethical values, and the vexed question is how to conjoin them. In this model of public engagement scientific experts are responsible for the determination of facts while ordinary citizens are charged to deliberate about their normative implications. Experts, accordingly, were not considered part of the 'public'; experts, in fact, were deliberately excluded in the process, as we have seen. The precarious distinction between facts and values thus determined the construction of the 'public' and rendered policy-making amendable to participation in the first place. The price to pay for the internalization of the public is the externalization of ethics, conceived of as a sphere of norms situated outside the domain of the merely technical. In the very attempt to overcome the separation between facts and values, the distinction was thus re-invented. What, then, happens to such an externalized ethics when it is called upon to do the work of bringing a 'public' into being? What kind of ethics is most appropriate for the constitution of a 'public'? Is there perhaps an 'appropriate ethics' just as there is an 'appropriate public'?

The social verdict

When the public engagement meetings began, the selected group of participants patiently listened to expert presentations dealing with the epidemiological basics of influenza, the virus, the disease, and current vaccination policy as well as past and future pandemics. Concluding from my own experience based on involvement in a number of such meetings, these presentations are usually very brief and participants frequently have a hard time to understand the complex information. In addition to these presentations, participants were asked to carry out a number of given 'ethics exercises' in order to 'grasp the nature of values dilemmas and the challenges incumbent in policy decisions involving competiting values and no obvious right choice' (CDC, 2005).

If it is true, as I have suggested, that the internalization of the public concomitantly implied the externalization of ethics, what happens to the ethical when it is called upon to bring a public into being? What kind of ethics was able to most eloquently articulate the collective body that participants were supposed to constitute? According to Bernier, participants were told at the public engagement meetings that their task was to rank in priority order a list of potential goals for a future pandemic influenza vaccination program. The list included the five goals of

1. 'save those most at risk'
2. 'put children and young people first'
3. 'limit the larger effects on society'
4. 'use a lottery system'
5. 'use the principle of "first come, first served"'

Subsequent to a round of open deliberation in small groups, participants were asked to solve a very complex and difficult public health matter by placing three dots on the most favored ends. According to the local organizer of one of these public engagement meetings, the purpose was to 'get a picture of how society feels about vaccine prioritization'. What the participants were supposed to express as a collective body were 'society's values'. Hence the importance that the organizers assigned to the process of public *deliberation*, which allowed participants to engage in a process of mutual persuasion and to gradually overcome particular concerns in the name of collective interests. As it turned out, the simulation of a social verdict, to use Strathern's apposite term here (Strathern, 2005), resulted in a priority list that consistently ranked the 'limiting of the larger effects on society' first (CDC, 2005).

As an ethical value of sorts, the goal of 'limiting the larger effects on society' greatly appealed to the participants in all public engagement meetings. What might perhaps explain this special appeal is the fact that it was an ethical value explicitly expressing a collective interest rather than an individual concern. The very formulation 'limiting the larger effects on society' indicated that a public health intervention of pharmaceutical prevention organized around this normative principle would benefit neither some random individuals nor some particular groups, but rather society as a whole. Charged to constitute a collective body, the participants thus selected an ethical value that most clearly articulated a collective interest. Rather than to privilege particular groups with special interests, the aim of 'limiting the larger effects on society' appeared to address society at large. By selecting this ethical value, participants thus achieved precisely what they were supposed to accomplish, namely to establish a collective body and transform the particular concerns of each into the common interest of everybody. Charged to represent society and express its values the public selected a value that protected society. This choice thus allowed participants to manifest themselves in a symbolic form appropriate to the mechanism of public engagement. But what exactly is 'society'? And what exactly might its 'protection' entail? And what kind of 'emergency' was at stake? It is to these seemingly straightforward questions that I now turn.

The Other Emergency

In the public engagement meetings on vaccine prioritization, participants were primarily concerned with 'limiting the larger effects on society', with 'assuring public safety' and with 'keeping society running'. There was a sense that 'essential services' and 'critical infrastructure' required some special form of protection so as to maintain 'social order' and assure the 'functioning of society' (CDC, 2005). Policemen, firemen, emergency responders, decision makers, utility workers, food distributors and the military were deemed central actors performing vital roles in critical times. As we have seen, the ACIP recommendations also put public health workers on top of the list but not because of the much publicized concern that nurses and physicians may not show up for work because of fear of infection (empirical evidence and historical experience suggest otherwise), but rather, and more importantly, because they might inadvertently infect patients at risk of serious complications.

In order to better understand this overwhelming concern with 'public safety' and the 'functioning of society' articulated in the carefully framed consultation of a relatively small

group of American citizens, it is imperative to examine in more detail the distinctive conceptualization of the 'emergency' that came to matter in the public engagement meetings. In what follows, I shall argue that the 'emergency', which operated as a generative genre of collective identification, took a historically distinctive and culturally specific form; a form that turned out to be very particular indeed, but also very effective. In contrast to the kind of ethical reasoning promoted by the organizers of the public engagement meetings, this emergency materialized a public that included both ordinary citizens and scientific experts alike, as we shall see shortly.

The first public engagement meeting was held in Atlanta on 27 August 2005. The following meetings in Boston, Omaha and Portland were convened in September and October. These three meetings took place only a few weeks after a major hurricane devastated large parts of the US Gulf Coast. In these days and weeks that followed the catastrophic 'natural' disaster wrought by Hurricane Katrina, it was the loss of lives, the suffering of people, the destruction of homes and the fatal consequences of a failed emergency response that took center stage in public conversation. Entire populations and communities had been left to their own devices in the midst of a major disaster. In addition, the US media kept disseminating misleading images of anarchy, crime and lawlessness crystallizing in the ominous figure of the 'looter'. These images of destruction, suffering and insecurity generated a troubling sense of total breakdown that seemed to threaten the most basic order of a modern society. The emergency response 'coordinated' by the US government, as is well known, miserably failed both before and after the catastrophic event. As American anthropologist Nancy Scheper-Hughes underscored in a 2005 editorial, 'it is difficult to say which is worse – the killer hurricane or the national response to it' (Scheper-Hughes, 2005). Given this context, it is perhaps less surprising, then, that the citizens who participated in the public engagement meetings only days after Hurricane Katrina's landfall seemed inclined to rate the functioning of society and the protection of social order as a high priority.

Perhaps, the citizen voices emphatically invoked but insufficiently engaged by the Pilot Project were actually trying to say much more than the organizers were able to acknowledge with their analytic distinctions and descriptive models. A focus less on denotational meaning might perhaps reveal that these voices responded in however ambiguous words not only to an emergency of the near future but also to a crisis of the recent past. As a matter of fact, it might well be true that dots were placed not only in anticipation of what might come but also in recollection of what had just been. Perhaps these voices were calling for a better federal leadership in disaster management and public health provisioning. Perhaps they were urging the government to take responsibility, consistently improve capacities and effectively care for people in times of crisis. Perhaps these citizens were concerned with the reliability of an emergency response that is lacking adequate equipment because of reluctant federal support. Whatever the multiple and ambiguous meanings of what was articulated at these meetings and whatever the subliminal influence of evocative images of a threatened order and the sudden realization of the fatal consequences of a poor emergency response, no documented effort was made to understand what participants were trying to say. The formal act of placing three dots on posters not only managed to cut off the deliberation midstream, but also offered the false hope of forever determining the meaning of the perspectives that were brought to bear on the issue, as if one could freely choose and permanently settle the

true meaning of one's words at a moment's notice. The narrow design of the meetings clearly failed to take into account the inevitable over-determination of meaning.

At the core of the Pilot Project lies the paradox that it actively took into consideration the social world people are said to come from. There was an honest and genuine effort to mirror the geographical parts of the country and to include representatives from various communities. However, the deep concern to cover all social backgrounds and include a broad range of cultural perspectives contrasted sharply with the insufficient effort to comprehend these backgrounds and perspectives in the context of their articulation. Paradoxically, the project erased the subject of participation and its perspective in the very moment of its production. It is undeniable, of course, that every model of public engagement depends on limited funding and must respond, at least to some degree, to the practical exigencies of bureaucratic organizations, but it is nonetheless troubling that the report with its detailed analysis running, after all, to over 95 pages, fails to mention Hurricane Katrina even once. This symbolic neglect, and perhaps even denial, is perhaps no coincidence and may be related to the narrow design of this particular type of public engagement process and the crucial aim of the Pilot Project to demonstrate the efficacy of participatory governance more generally. Instead of exploring the historical context and the social worlds of the people who participated in the meetings, the Pilot Project focused primarily on the less ambiguous task of counting the number of dots that had been placed on posters at the end of the day. The assumption that people always come from somewhere rather than nowhere both did and did not count.

A fragile translation

As I have suggested, what participants might have meant by what they said is not necessarily transparent, obvious or self-evident. And when it comes to 'society' and its 'protection' in a state of 'emergency' the problem becomes even more complex and intricate, especially when that 'society' is asked to imagine an emergency in the future while it is confronted with a disaster in the present. What might 'society' mean? And what might 'protection' entail? And what kind of 'emergency' is at stake? At the US Department of Homeland Security it was abundantly clear what the citizen voices were trying to say when the protection of 'society' was invoked. What the 'public' apparently was asking for was 'critical infrastructure protection'. The 'public's' concern, as it was framed in the public engagement meetings, was immediately translated by DHS experts into a technical concept of security that had been signed into law immediately after the terrorist attacks of 11 September 2001 and the ensuing dissemination of four anthrax letters. Although the concept primarily referred to information systems at the time, it was gradually enlarged after Hurricane Katrina to include the sectors of telecommunications, energy, financial services, manufacturing, water, transportation, health care and emergency services. The possible disruption of this nationally conceived infrastructure in a state of emergency became a foundational problem for 'homeland security' and the political rationality of 'preparedness' (Lakoff, 2007a; Collier and Lakoff, 2008). A new epistemological field of representation and intervention was carved out and immediately peopled with truth claims, methods of producing such truth claims and a mix of experts, each representing a particular node of the infrastructural network that keeps 'society', defined primarily in terms of a seamless circulation of people, goods and things, running.

In May 2006, Department of Homeland Security Secretary Michael Chertoff requested the National Infrastructure Advisory Council (NIAC) to provide specific recommendations for the prioritization of pandemic countermeasures for essential workers in the critical infrastructure and key resource sectors (NIAC, 2007). Specifically, the NIAC was asked to identify and define critical services, to establish criteria and principles for critical service prioritization and to determine critical employee groups in each service. In the report, employees assigned to the first tier amount to the exact number of 12 389 077 (NIAC, 2007) – a mathematical precision verging on the surreal. Paradoxically, employees appeared in this account of *technical* networks as autonomous actors detached from *social* networks, ready to be vaccinated while their unprotected families would remain at risk. Critical infrastructure, it was argued, included the following sectors: banking and finance, chemical, commercial facilities, communications, electricity, emergency services, food and agriculture, healthcare, information technology, nuclear, oil and natural gas, postal and shipping, transportation, water and wastewater.

Having determined, on the basis not of historical evidence, but of speculative projection, that the protection of critical infrastructure indeed constituted a significant problem during an outbreak of pandemic influenza, officials at the US Department of Homeland Security and the US Department of Health and Human Services began mining for a suitable way of changing the official and already published ACIP vaccination scheme that was accused of its 'health bias', as one expert put it to me.[5] The Public Engagement Pilot Project and the fragile translation of its ambiguous results into the technical concept of critical infrastructure protection allowed government officials to initiate a fundamental revision of the prioritization scheme. Yet the experimental character of the Pilot Project concomitantly raised the problem of its legitimacy. In order to justify the envisioned change, the National Vaccine Office agreed to launch a second cycle of public engagement meetings, which deliberately avoided casting itself as an experimental technology of public governance. These meetings were convened in 2007 in Nassau County, New York and in Las Cruces, New Mexico. Two additional meetings (one in Milwaukee, Wisconsin and one in Henderson County, North Carolina) were scheduled but never took place. This second series of meetings was organized not by Dr Bernier but by Dr Schwartz at the National Vaccine Office. The public mobilized for these new meetings was supposed to respond once again to the same question that had already been posed by the Pilot Project.

A haunting past

When Ben Schwartz presented the draft of the new federal guidance on vaccination prioritization at a meeting in February 2007, he underscored that in contrast to the ACIP plan, the new guidance, concerned primarily with 'critical infrastructure protection', was based on a much more complex, and thus presumably more realistic, scenario of pandemic influenza. The new guidance, Dr Schwartz declared, considered not one but three possible scenarios of pandemic influenza. As Dr Julie Gerberding, director of the US CDC explained at a press conference, one 'very important and (…) new concept that we introduced (…) is

5 For the fundamental role that scenario planning as a mode of simulating threats plays in regimes of preparedness, see Lakoff (2008).

the concept that not all pandemics are equally severe' (CDC, 2007). Given this understanding of pandemic influenza, the vaccination plan was specified for the case of a severe, a moderate and a less severe pandemic. This historically distinctive classification of pandemic influenza was based on a severity index recently developed by the disease control centers in order to calibrate public health interventions according to different types of pandemic influenza. The key principle used to measure pandemic severity is lethality, or, to be more precise, the case-fatality ratio, the percentage of deaths out of the total of reported cases of disease. The pandemic severity index was initially developed by officials of the federal government for *non-pharmaceutical* interventions and was deliberately designed by planners to mimic the Saffir-Simpson Hurricane Scale. As Gerberding noted, with recent memories of Hurricane Katrina 'we have embedded in our minds some understanding of the difference in severity'. 'A pandemic', Gerberding added, 'that does not move very fast from person to person, or does not have a very high fatality rate would likely be a fairly mild pandemic. (…) And the kinds of interventions that we might recommend in that setting wouldn't be the full court press that we would use if we were dealing with something more serious. On the other hand, we know in 1918 for example, we had a pandemic that not only moved with extraordinary speed from person to person and around the world but it also had an unusually high mortality rate. We would categorize that as a category 5 pandemic' (CDC, 2007). For reasons of simplicity, the new vaccination guidance was modeled not on five but on three distinct categories of pandemic severity.

For some of my interlocutors in the public health community the hurricane analogy seemed rather inappropriate given the dramatic failure of the US government to provide emergency relief when Hurricane Katrina struck. Furthermore, the Pandemic Severity Index, as officials called it, might not even constitute a useful planning tool for vaccine prioritization, public health professionals at the New York City Department of Health and Mental Hygiene pointed out in conversations with me. As Gerberding noted, pandemics can vary enormously. They can be indistinguishable from regular seasonal influenza in terms of morbidity and mortality, as the case of the pandemic of 1968 (as well as the 'pandemic' of 1947 and the 'pandemic' of 1977) indicate (Kilbourne, 2006). When different pandemics of influenza are compared with each other *in retrospect*, it is indeed possible to distinguish between a severe, a moderate and a less severe pandemic. But what if one envisions a pandemic as it unfolds *in real-time*? The devastating pandemic of 1918, as experts explained to me, came in three subsequent waves. The first wave was moderate, the second severe and the third moderate again. Furthermore, there are significant geographical differences in terms of morbidity and mortality during such pandemics, as studies clearly show. At what point, then, can we qualify a pandemic as severe when it may be moderate at first, severe four months later and less severe another four months later? How will a vaccine be distributed over the course of several months when we know that the *same* pandemic may be severe, moderate and less severe? In contrast to a hurricane, a pandemic comes in a series of waves that may vary in severity. What, then, does it mean to prioritize protective vaccine according to distinct categories of pandemic influenza modeled on a concept of hurricanes when we know that the disease can change within a few weeks and become either more or less severe? Analogies, of course, always have their faults but in 'Post-Katrina, Pre-Pandemic America' (Schoch-Spana, 2006) the hurricane analogy culturally seemed to make sense, not only among ordinary citizens but also among scientific experts.

Epilogue

The revision of the ACIP recommendations for the prioritized allocation of pandemic vaccine in a state of emergency was praised by Michael O. Leavitt, Secretary of the US Department of Health and Human Services, as a triumph of democratic decision-making (HHS, 2008). However, the political interests animating the public engagement meetings and the fragile mechanisms translating the ambiguous results into a technical concept of security are reason enough to view such enthusiastic claims articulated by government officials with a healthy grain of skepticism. As Nancy Fraser once astutely observed, 'there is still quite a lot to object to in our own actually existing democracy, and the project of a critical theory of the limits of democracy in late-capitalist societies remains as relevant as ever' (Fraser, 1992). This critical project may well have acquired a new urgency in times in which the performance of 'participation' has increasingly come to operate as a powerful technology of political governance (Gottweis, 2008).

Although I principally feel sympathetic to genuine efforts aimed at involving communities in decisions that may have a tremendous impact on their health and well-being, I have nonetheless decided to approach public engagement in this article from a somewhat removed analytic angle. My aim here has neither been to determine if public engagement is democratic or not, nor to suggest how it might be made more democratic, more inclusive and more representative. The very recognition of the failure to achieve adequate expression and representation, in fact, fuels the demand for more and better attempts to involve what must remain, as Nancy Fraser and Michael Warner point out, an ever-changing, ever-emerging symbolic referent (Fraser, 1992; Warner, 2005). In fact, internal critique, the constant 'methodological revisionism' identified by Bill Cooke and Uma Kothari, seems to play a generative role in the social reproduction of participatory forms of governance (Cooke and Kothari, 2001). Nor is it my intention to explore if public engagement is able to preempt public concerns and manufacture the trust and credibility that once ostensibly seemed to characterize the social contract between 'science' and 'society', to use Gibbons' (and Nowotny's) terms (Gibbons, 1999; Nowotny *et al*, 2001). Rather than to ask if public engagement is able to deliver on its promise, my account has drawn attention to some of the contexts in which public engagement occurred in the United States and it thus contributes to recent explorations of the animation and mobilization of publics in regulatory contexts (Strathern, 2002, 2005; Hayden, 2003; Miller, 2003; Reardon, 2007; Rothstein, 2007; Gottweis, 2008; Lengwiler, 2008).

Although the prioritization scheme that came out of the public engagement meetings appears to be more representative than the ACIP guidance, it is not necessarily more ethical. From an ethnographic point of view, the difference lies primarily in the fact that in one case ethics was made explicit. This process of making ethics explicit, of generating a moral paper trail documenting the fact that ethical concerns have been taken into account in the making of public policy, is a distinctive feature of the 'new bureaucracies of virtue', to borrow Jacob and Riles's apt turn of phrase (Jacob and Riles, 2007). Deliberately built into the design of public engagement itself was a particular kind of value, namely the democratic value of equivalence. With the exception of this value, all other values were treated even-handedly. But this conscious commitment to equivalence turns out to be highly problematic when some people are at risk of dying while others are not. What, we might ask, is the ethics of giving

equal weight to the perspective of a person who is at risk of dying because of his or her age, or the precarious state of his or her immune system (due to HIV/AIDS or chemotherapy) and the perspective of a person who will be affected by a pandemic primarily in terms of his or her economic well-being?

The public engagement process was deliberately designed to recognize difference but it concomitantly rendered these differences equivalent and thus interchangeable. In the very act of the recognition of difference, difference was misrecognized. If it is true that there is more at stake for some people than for others, if it is true that critical differences in medical conditions cannot simply be bracketed as if they would not exist, then how can we, as Isabelle Stengers puts it, 'present a proposal intended not to say what is, or what ought to be but to provoke thought, a proposal that requires no other verification than the way in which it is able to "slow down" reasoning and create an opportunity to arouse a slightly different awareness of the problems and situations mobilizing us?' (Stengers, 2004). My aim, in this article, has been to present such a kind of proposal. In doing so, I have avoided to simply contrast the weaknesses of quantitative methods with the strengths of qualitative research, exploring instead in some detail, and with all the necessary detours, what kind of public, what kind of ethics and what kind of emergency have come to matter in a contemporary regime of pharmaceutical prevention in which the animation and mobilization of the public has become a means of identifying and circumscribing the population as a target of biopolitical regulation.

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